

Section I. (Amendments to the Specification)

1. On page 13, the paragraph beginning at line 10 has been replaced by the following paragraph (which contains markings to show changes made):

Each diffraction cone 16 results from one particular set of crystallographic planes (hkl) 18 which meets the Bragg condition, while each cone 16 contains a large number of spots on different locations of the cone. Such spots are formed by diffracted beam vectors 12 and 12' generated by many randomly oriented grains within the irradiated volume. Using a two-dimensional x-ray imaging device, a diffraction image can be obtained with multiple Debye rings 14, which represent planar slices through multiple diffraction cones. Figures 5-7 are all diffraction images taken for thin copper films, showing fractions of Debye rings formed by crystallographic planes (111), (200), and (220).

2. On page 18, the paragraph beginning at line 11 has been replaced by the following paragraph (which contains markings to show changes made):

Additional information concerning the apparatus arrangement, is contained in co-pending (now allowed) U.S. Application No. 09/365,063 for "Apparatus and Method for Texture Analysis on Semiconductor Wafers" filed July 30, 1999 and issued as U.S. Patent No. 6,301,330 on October 9, 2001, the contents of which are herein incorporated by reference in their entirety for all purposes. The apparatus disclosed in such co-pending application allows in-plane rotation of the sample about a single measurement spot. Therefore, diffraction data can be collected at sequential rotations in order to obtain a large number of different grains, or spots for grain size analysis while simultaneously collecting the required data for texture analysis.

3. On page 19, the paragraph beginning at line 9 has been replaced by the following paragraph (which contains markings to show changes made):

First, raw diffraction data comprising Debye ring segments obtained from the area detector are acquired and stored. Any of the multiple (hkl) reflections present within the detector image can

be analyzed. In order to register a sufficient number of spots at any sample location, the sample can be rotated in the sample plane with the center of rotation coinciding with the irradiated measurement spot. During data acquisition, quantitative texture analysis can also be performed in the same measurement sequence, according to the procedure disclosed in U.S. Application No. 09/365,063, which has been issued as U.S. Patent No. 6,301,330. The quantitative texture information can be later factored in, to achieve accurate grain size analysis for polycrystalline materials with a significant degree of texture.